

SEQUENCE LISTING

<110> Bramley, John A.
Plaut, Karen I.
Kerr, David

<120> TREATMENT OF STAPHYLOCOCCUS INFECTIONS

<130> Mastitis

<140> 00/000,000

<141> 2000-10-27

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<170> PatentIn Ver. 2.1

<210> 1

<211> 1486

<212> DNA

<213> Staphylococcus simulans

<400> 1

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<211> 388

<212> PRT

<213> Staphylococcus simulans

<400> 2

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35 40 45

Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val
50 55 60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
65 70 75 80

Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
85 90 95

Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
100 105 110

Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
115 120 125

Val Glu Thr Ser Lys Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala
130 135 140

Ala Thr His Glu His Ser Gln Trp Leu Asn Asn Tyr Lys Lys Gly Tyr
145 150 155 160

Gly Tyr Gly Pro Tyr Pro Leu Gly Ile Asn Gly Gly Met His Tyr Gly
165 170 175

Val Asp Glu Phe Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser
180 185 190

Gly Lys Ile Val Glu Ala Gly Trp Ser Asn Tyr Gly Gly Gly Asn Gln
195 200 205

Ile Gly Leu Ile Glu Asn Asp Gly Val His Arg Gln Glu Tyr Met His

210 215 220
 Leu Ser Lys Tyr Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln
 225 230 235 240
 Ile Ile Gly Trp Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu
 245 250 255
 His Phe Gln Arg Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp
 260 265 270
 Pro Met Pro Phe Leu Lys Ala Ser Gly Tyr Gly Lys Ala Gly Gly Thr
 275 280 285
 Val Thr Pro Thr Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr
 290 295 300
 Leu Tyr Lys Ser Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile
 305 310 315 320
 Thr Arg Thr Thr Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu
 325 330 335
 Lys Ala Gly Gln Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly
 340 345 350
 His Val Trp Val Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu
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 Gly Thr Ile Lys
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<210> 3

<211> 741

<212> DNA

<213> Staphylococcus simulans

<400> 3

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<210> 4

<211> 1520

<212> DNA

<213> Staphylococcus simulans

<400> 4

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<210> 5

<211> 480

<212> PRT

<213> Staphylococcus simulans

<400> 5

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Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val
35 40 45

Ala Glu Val Glu Thr Ser Lys Pro Pro Val Glu Asn Thr Ala Glu Val
50 55 60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
65 70 75 80

Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
85 90 95

Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
100 105 110

Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
115 120 125

Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr
130 135 140

Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala
145 150 155 160

Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu
165 170 175

Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala
180 185 190

Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu
195 200 205

Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys
210 215 220

Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala Ala Thr His Glu His
225 230 235 240

Ser Ala Gln Trp Leu Asn Asn Tyr Lys Tyr Gly Tyr Gly Tyr Gly Pro
245 250 255

Tyr Pro Leu Gly Ile Asn Gly Gly Ile His Tyr Gly Val Asp Phe Phe
 260 265 270

Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val
 275 280 285

Glu Ala Gly Trp Ser Asn Tyr Gly Gly Gly Asn Gln Ile Gly Leu Ile
 290 295 300

Glu Asn Asp Gly Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr
 305 310 315 320

Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp
 325 330 335

Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg
 340 345 350

Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe
 355 360 365

Leu Lys Ser Ala Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr
 370 375 380

Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser
 385 390 395 400

Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr
 405 410 415

Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln
 420 425 430

Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val
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Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr
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Trp Asn Lys Ser Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys
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<210> 6

<211> 492
 <212> PRT
 <213> Achromobacter lyticus

<400> 6

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			20					25					30		
Glu	Thr	His	Ala	Ser	Glu	Lys	Ser	Asn	Met	Asp	Val	Ser	Lys	Lys	Val
		35					40					45			
Ala	Glu	Val	Glu	Thr	Ser	Lys	Ala	Pro	Val	Glu	Asn	Thr	Ala	Glu	Val
	50					55				60					
Glu	Thr	Ser	Lys	Ala	Pro	Val	Glu	Asn	Thr	Ala	Glu	Val	Glu	Thr	Ser
65				70					75					80	
Lys	Ala	Pro	Val	Glu	Asn	Thr	Ala	Glu	Val	Glu	Thr	Ser	Lys	Ala	Pro
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		100					105					110			
Thr	Ala	Glu	Val	Glu	Thr	Ser	Lys	Ala	Pro	Val	Glu	Asn	Thr	Ala	Glu
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145				150					155					160	
Pro	Val	Glu	Asn	Thr	Ala	Glu	Val	Glu	Thr	Ser	Lys	Ala	Pro	Val	Glu
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Ala	Pro	Val	Glu	Asn	Thr	Ala	Glu	Val	Glu	Thr	Ser	Lys	Ala	Leu	Val

225		230		235		240
Gln Arg Thr Ala Leu Arg Ala Ala Thr His Glu His Ser Ala Gln Trp						
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Leu Asn Asn Tyr Lys Lys Gly Tyr Gly Tyr Gly Pro Tyr Pro Leu Gly						
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Ile Asn Gly Gly Met His Tyr Gly Val Asp Phe Phe Met Asn Ile Gly						
	275		280		285	
Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val Glu Ala Gly Trp						
	290		295		300	
Ser Asn Tyr Gly Gly Gly Asn Gln Ile Gly Leu Ile Glu Asn Asp Gly						
305		310		315		320
Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr Asn Val Lys Val						
	325		330		335	
Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp Ser Gly Ser Thr						
	340		345		350	
Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg Met Val Asn Ser						
	355		360		365	
Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe Leu Lys Ser Ala						
	370		375		380	
Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr Pro Asn Thr Gly						
385		390		395		400
Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser Glu Ser Ala Ser						
	405		410		415	
Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr Gly Pro Phe Arg						
	420		425		430	
Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln Thr Ile His Tyr						
	435		440		445	
Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val Gly Tyr Thr Gly						
	450		455		460	
Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr Trp Asn Lys Ser						
465		470		475		480
Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys						

<210> 7

<211> 741

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: altered S.
simulans lysostaphin gene

<400> 7

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<210> 8

<211> 480

<212> PRT

<213> Staphylococcus simulans

<400> 8

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Leu Ser Thr Phe Ala Leu Ala Ser Ile Val Tyr Gly Gly Ile Gln Asn
    20             25            30

Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val
    35             40            45

Ala Glu Val Glu Thr Ser Lys Pro Pro Val Glu Asn Thr Ala Glu Val
    50             55            60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
    65             70            75            80

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Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
 85 90 95
 Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
 100 105 110
 Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
 115 120 125
 Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr
 130 135 140
 Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala
 145 150 155 160
 Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu
 165 170 175
 Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala
 180 185 190
 Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu
 195 200 205
 Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys
 210 215 220
 Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala Ala Thr His Glu His
 225 230 235 240
 Ser Ala Gln Trp Leu Asn Asn Tyr Lys Tyr Gly Tyr Gly Tyr Gly Pro
 245 250 255
 Tyr Pro Leu Gly Ile Asn Gly Gly Ile His Tyr Gly Val Asp Phe Phe
 260 265 270
 Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val
 275 280 285
 Glu Ala Gly Trp Ser Asn Tyr Gly Gly Gly Asn Gln Ile Gly Leu Ile
 290 295 300
 Glu Asn Asp Gly Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr
 305 310 315 320
 Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp
 325 330 335

Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg
 340 345 350

Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe
 355 360 365

Leu Lys Ser Ala Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr
 370 375 380

Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser
 385 390 395 400

Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr
 405 410 415

Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln
 420 425 430

Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val
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Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr
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Trp Asn Lys Ser Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys
 465 470 475 480

<210> 9

<211> 1825

<212> DNA

<213> Staphylococcus simulans

<400> 9

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<210> 10

<211> 6457

<212> DNA

<213> *Achromobacter lyticus*

<400> 10

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